Please provide the following information, and submit to the NOAA DM Plan Repository.

Reference to Master DM Plan (if applicable)

As stated in Section IV, Requirement 1.3, DM Plans may be hierarchical. If this DM Plan inherits provisions from a higher-level DM Plan already submitted to the Repository, then this more-specific Plan only needs to provide information that differs from what was provided in the Master DM Plan.

URL of higher-level DM Plan (if any) as submitted to DM Plan Repository:

1. General Description of Data to be Managed

1.1. Name of the Data, data collection Project, or data-producing Program:

Coastal Bend Texas Benthic Habitat Mapping Patchy Shapefile Map - Lower Laguna Madre

1.2. Summary description of the data:

The NOAA Office for Coastal Management (OCM) requested the creation of benthic habitat data along the southern Texas coast to support the Texas Seagrass Monitoring Program. The benthic habitat map was created from 1m ADS40 digital airborne imagery collected along the Texas coast during 2004 for the National Agriculture Imagery Program. The original raw images were reprocessed into 3-band true color and color-IR orthos. The benthic habitat map was created from resampled 2m mosaicked orthos. Habitat classification was performed through segmentation of the imagery using Definiens Professional and habitat labeling through Classification and Regression Tree (CART) Analysis. The minimum mapping unit is 100m2. This map covers Lower Laguna Madre, which is approximately 800mi2.

Original contact information:

Contact Name: Becky Jordan

Contact Org: Fugro EarthData, Inc.

Title: Project Manager

Phone: 301-948-8550

Email: bjordan@earthdata.com

1.3. Is this a one-time data collection, or an ongoing series of measurements?

One-time data collection

1.4. Actual or planned temporal coverage of the data:

2008-09-17

1.5. Actual or planned geographic coverage of the data:

W: -97.516227, E: -97.148929, N: 26.955027, S: 25.996454

1.6. Type(s) of data:
(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)
Map (digital)

1.7. Data collection method(s):
(e.g., satellite, airplane, unmanned aerial system, radar, weather station, moored buoy, research vessel, autonomous underwater vehicle, animal tagging, manual surveys, enforcement activities, numerical model, etc.)

1.8. If data are from a NOAA Observing System of Record, indicate name of system:

1.8.1. If data are from another observing system, please specify:

2. Point of Contact for this Data Management Plan (author or maintainer)

2.1. Name:
NOAA Office for Coastal Management (NOAA/OCM)

2.2. Title:
Metadata Contact

2.3. Affiliation or facility:
NOAA Office for Coastal Management (NOAA/OCM)

2.4. E-mail address:
coastal.info@noaa.gov

2.5. Phone number:
(843) 740-1202

3. Responsible Party for Data Management
Program Managers, or their designee, shall be responsible for assuring the proper management of the data produced by their Program. Please indicate the responsible party below.

3.1. Name:

3.2. Title:
Data Steward

4. Resources
Programs must identify resources within their own budget for managing the data they produce.

4.1. Have resources for management of these data been identified?

4.2. Approximate percentage of the budget for these data devoted to data management (

specify percentage or "unknown"):

5. Data Lineage and Quality

NOAA has issued Information Quality Guidelines for ensuring and maximizing the quality, objectivity, utility, and integrity of information which it disseminates.

5.1. Processing workflow of the data from collection or acquisition to making it publicly accessible

(describe or provide URL of description):

Process Steps:

- 2008-09-17 00:00:00 - The original 1m DOQQs for the project area were resampled to 2m and mosaicked. For habitat classification, the mosaicked imagery was divided into two processing areas for Lower Laguna Madre, resulting in a total of four 2m mosaicked orthos: one set of two mosaics for true color and one set of two mosaics for color-IR. Lower Laguna Madre was divided into two processing areas. Image segmentation was performed in Definiens Professional using the blue, green, red, and near-infrared bands for each of the processing areas. The classification of the habitat segments (as ESRI polygon shapefiles) was performed using CART analysis. The habitat maps for each area was refined with the aid of field data collected during July, August, and October of 2007. The two processing area shapefiles were edgematched to one another and clipped to the final project area boundary. Adjacent areas do not overlap, and each polygon, within and across all processing areas and bay systems, has a unique polygon identification number. Each shapefile was checked for proper topology and to insure that each polygon has a correct habitat label, habitat code, modifier label if present, unique identification number, and an area calculation. Polygons below the 100m2 minimum mapping unit (MMU) were eliminated, though some polygons <100m2 were retained if their area changed to below the MMU due to the polygon boundary smoothing process. (Citation: 2004 ADS40 Digital NAIP Imagery)
- 2008-09-17 00:00:00 - The habitat data also went through a NOAA independent validation review. Polygons in the habitat map labeled as Patchy SRV (seagrass) were used to mask the 2m image mosaics for further classification of these areas. Pixels in the imagery falling within the Patchy SRV polygons were classified into a " percent seagrass" cover category. For each Patchy SRV polygon from the habitat map, the average percent seagrass coverage was calculated based on the coverage values of each pixel within the polygon. Accuracy assessment was performed on seven classes with Patchy SRV and Continuous SRV being combined into a single accuracy class. For field data collection, non-random sites in the form of polygons were chosen by analysts with an attempt to sample all available image signatures. These sites were visited in the field and data on each site was collected directly into digital format (ESRI shapefile) using a laptop or onto a paper form that was later entered into digital format. Sites were navigated to primarily using a Garmin GPS 76 unit connected to a Panasonic Toughbook laptop displaying the project imagery and polygons in ArcMap v9.1 or using the GPS unit alone. Habitat classification was

estimated as accurately as possible using different methods or combination of methods which included above water observation, snorkeling, wading, and underwater video. This data was entered into an ESRI shapefile via a digital field form in ArcMap specifically developed for this type of field data collection. More sample polygon sites were collected in-office based on the in-field collected sites in order to meet the 30 sites per class accuracy assessment requirement. For each class, a random selector macro in ArcMap was used to randomly select 30 sites for accuracy assessment. The entire pool of accuracy sites was kept separate from the remaining sites and only used for accuracy assessment during the project. Anonymity of the accuracy sites was maintained throughout the project because it was unnecessary to ever visually review these sites in order to perform the accuracy analysis. More accuracy assessment sites were collected in a later field collection trip to add to the analysis. These sites were chosen by randomly selecting polygons within specific regions that were pre-determined to be visited. Information for these sites was collected using the same methods for the other sites. Accuracy information was compiled using ArcMap. The Zonal Statistics tool in ArcToolbox was used to collect accuracy information from the habitat map using the accuracy polygons. The "mean" statistic was used to determine the map value for each accuracy polygon. An accuracy assessment error matrix was generated using this information by importing it to Microsoft Excel and building the matrix. Both deterministic and fuzzy accuracy assessment were performed. The accuracy analysis and error matrices are presented and discussed in the project final report entitled Coastal Bend of Texas Benthic Habitat Mapping Phase 2 Final Report. (Citation: 2004 ADS40 Digital NAIP Imagery)

5.1.1. If data at different stages of the workflow, or products derived from these data, are subject to a separate data management plan, provide reference to other plan:

5.2. Quality control procedures employed (describe or provide URL of description):

6. Data Documentation

The EDMC Data Documentation Procedural Directive requires that NOAA data be well documented, specifies the use of ISO 19115 and related standards for documentation of new data, and provides links to resources and tools for metadata creation and validation.

6.1. Does metadata comply with EDMC Data Documentation directive?

No

6.1.1. If metadata are non-existent or non-compliant, please explain:

Missing/invalid information:

- 1.7. Data collection method(s)
- 3.1. Responsible Party for Data Management
- 4.1. Have resources for management of these data been identified?

- 4.2. Approximate percentage of the budget for these data devoted to data management
- 5.2. Quality control procedures employed
- 7.1. Do these data comply with the Data Access directive?
- 7.1.1. If data are not available or has limitations, has a Waiver been filed?
- 7.1.2. If there are limitations to data access, describe how data are protected
- 7.3. Data access methods or services offered
- 7.4. Approximate delay between data collection and dissemination
- 8.1. Actual or planned long-term data archive location
- 8.3. Approximate delay between data collection and submission to an archive facility
- 8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?

6.2. Name of organization or facility providing metadata hosting:

NMFS Office of Science and Technology

6.2.1. If service is needed for metadata hosting, please indicate:

6.3. URL of metadata folder or data catalog, if known:

https://www.fisheries.noaa.gov/inport/item/47961

6.4. Process for producing and maintaining metadata

(describe or provide URL of description):

Metadata produced and maintained in accordance with the NOAA Data Documentation Procedural Directive: https://nosc.noaa.gov/EDMC/DAARWG/docs/EDMC_PD-Data_Documentation_v1.pdf

7. Data Access

NAO 212-15 states that access to environmental data may only be restricted when distribution is explicitly limited by law, regulation, policy (such as those applicable to personally identifiable information or protected critical infrastructure information or proprietary trade information) or by security requirements. The EDMC Data Access Procedural Directive contains specific guidance, recommends the use of open-standard, interoperable, non-proprietary web services, provides information about resources and tools to enable data access, and includes a Waiver to be submitted to justify any approach other than full, unrestricted public access.

7.1. Do these data comply with the Data Access directive?

7.1.1. If the data are not to be made available to the public at all, or with limitations, has a Waiver (Appendix A of Data Access directive) been filed?

7.1.2. If there are limitations to public data access, describe how data are protected from unauthorized access or disclosure:

7.2. Name of organization of facility providing data access:
NOAA Office for Coastal Management (NOAA/OCM)

7.2.1. If data hosting service is needed, please indicate:

7.2.2. URL of data access service, if known:
ftp://ftp.coast.noaa.gov/pub/benthic/Benthic_Cover_Data/TX_CoastalBend_phaseIIa_patchy_srv_p.zip

7.3. Data access methods or services offered:

7.4. Approximate delay between data collection and dissemination:

7.4.1. If delay is longer than latency of automated processing, indicate under what authority data access is delayed:

8. Data Preservation and Protection

The NOAA Procedure for Scientific Records Appraisal and Archive Approval describes how to identify, appraise and decide what scientific records are to be preserved in a NOAA archive.

8.1. Actual or planned long-term data archive location:
(Specify NCEI-MD, NCEI-CO, NCEI-NC, NCEI-MS, World Data Center (WDC) facility, Other, To Be Determined, Unable to Archive, or No Archiving Intended)

8.1.1. If World Data Center or Other, specify:

8.1.2. If To Be Determined, Unable to Archive or No Archiving Intended, explain:

8.2. Data storage facility prior to being sent to an archive facility (if any):
Office for Coastal Management - Charleston, SC

8.3. Approximate delay between data collection and submission to an archive facility:

8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?
Discuss data back-up, disaster recovery/contingency planning, and off-site data storage relevant to the data collection

9. Additional Line Office or Staff Office Questions

Line and Staff Offices may extend this template by inserting additional questions in this section.